



COMMERCIAL SOLID WASTE MANAGEMENT FOR NEW YORK CITY

INITIATIVE 1 / **RATING SYSTEM FOR LOW-WASTE PRODUCTS**
INITIATIVE 2 / **CORPORATE AND INSTITUTIONAL CHALLENGES**
INITIATIVE 3 / **INDUSTRIAL ECOLOGY**

RESEARCH FOR PLANYC 2.0 SOLID WASTE MANAGEMENT SECTION

MAY 3rd, 2011

CAPSTONE WORKSHOP FOR MASTER OF SCIENCE IN SUSTAINABILITY MANAGEMENT

New York City Mayor's Office of Long-Term Planning and Sustainability
Columbia University in the City of New York

AGENDA

> **INTRODUCTION**

- > Background Information
- > Initiative Definitions
- > Research Scope
- > Overall Study Design and Research Methodology

> **RATING SYSTEMS FOR LOW-WASTE PRODUCTS**

- > **INITIATIVE 1 - REDUCE**

> **CORPORATE AND INSTITUTIONAL CHALLENGES**

- > **INITIATIVE 2 - RECYCLE**

> **INDUSTRIAL ECOLOGY**

- > **INITIATIVE 3 - REUSE**

> **CONCLUSION AND RECOMMENDATIONS**

BACKGROUND

**APPROXIMATELY 47,000
TONS OF WASTE ARE
GENERATED BY THE CITY
EVERY SINGLE DAY.**

BACKGROUND

**CLIENT → NEW YORK CITY MAYOR'S OFFICE OF
LONG-TERM PLANNING AND SUSTAINABILITY****PROJECT →
RESEARCH FOR PLANYC
2.0 SOLID WASTE
MANAGEMENT SECTION**

- > PlaNYC 2.0 has just been updated and expanded to include a **Solid Waste Management** section.
- > PlaNYC 2.0 has reflected the City's solid waste management philosophy of **reduce, reuse, and recycle**.

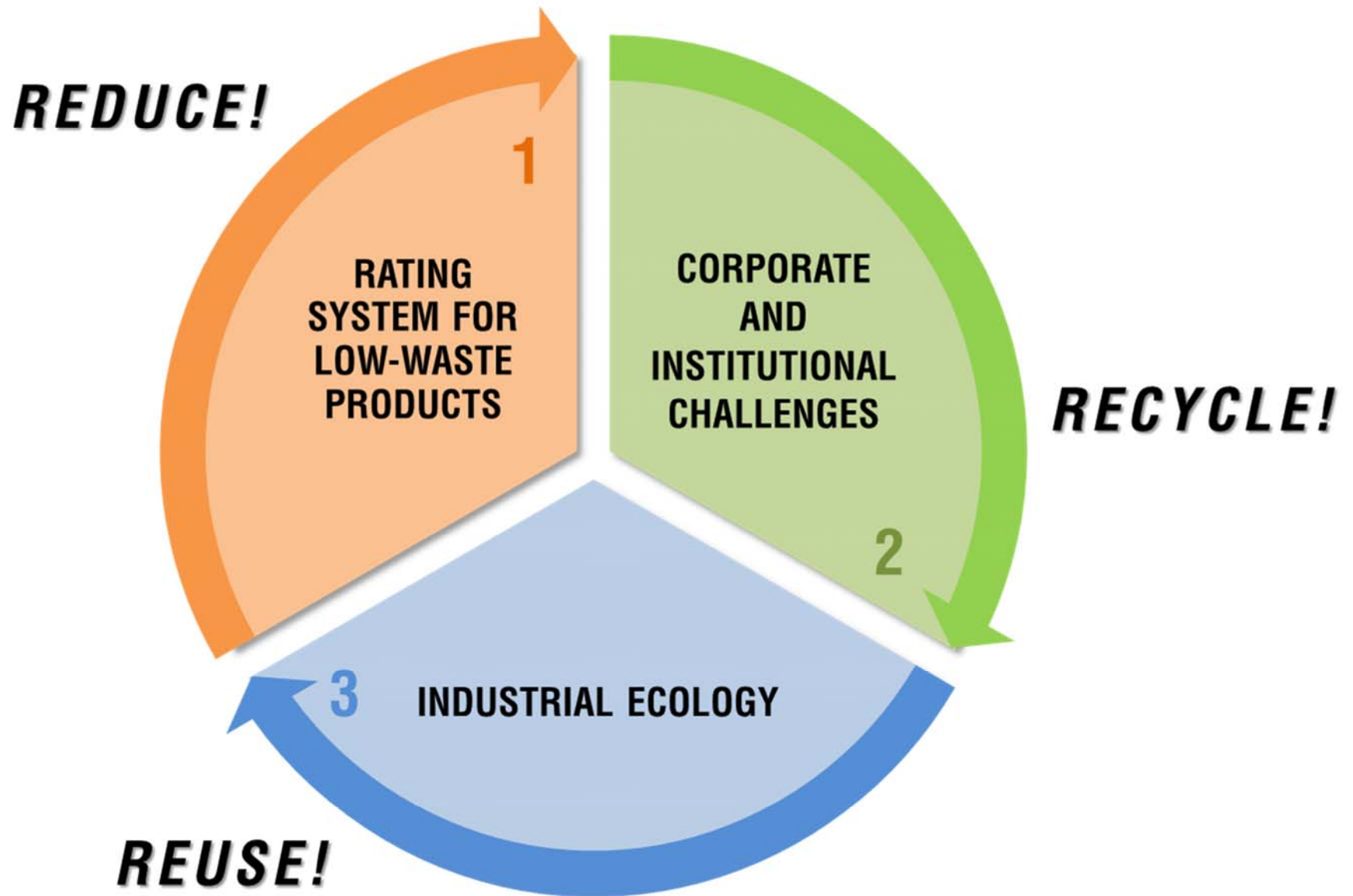
**CONTEXT →
APPROXIMATELY 47,000
TONS OF WASTE
GENERATED PER DAY**

- > **Evaluate whether waste management initiatives are feasible in New York City and will result in the reduction or diversion of waste.**
- > **What should the City's role be in partnering with stakeholders, and in encouraging these practices?**

**OBJECTIVE →
COMMERCIAL SOLID
WASTE REDUCTION AND
DIVERSION**

- > In PlaNYC 2.0 a **diversion goal of 75%** by 2030 is proposed, for the combined commercial and DSNY-managed waste stream.

HOW CAN WE REDUCE THE CITY'S SOLID WASTE?



INITIATIVE DEFINITIONS



RATING SYSTEMS FOR LOW-WASTE PRODUCTS

A system for consumers that identifies the scale of waste generated by a rated product.

1

CORPORATE AND INSTITUTIONAL CHALLENGES

A program designed to challenge corporations or institutions to reduce or divert their waste.

2

INDUSTRIAL ECOLOGY

The practice of using the waste output produced from one process as the input for another production process.

3

RESEARCH SCOPE

**RATING SYSTEMS
FOR LOW-WASTE
PRODUCTS**

1

**CORPORATE AND
INSTITUTIONAL
CHALLENGES**

2

**INDUSTRIAL
ECOLOGY**

3

- > IDENTIFY EXISTING MODELS AND BEST PRACTICES FOR EACH INITIATIVE.**
- > PROPOSE RECOMMENDATIONS AND THE CITY'S ROLE IN FACILITATING, ENCOURAGING OR ADMINISTERING EACH INITIATIVE.**
- > DETERMINE THE OBSTACLES TO IMPLEMENTATION.**

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EXISTING MODELS AND BEST PRACTICES

	<u>BEST PRACTICES</u>	<u>APPLICABLE COMPONENTS</u>
<u>THIRD-PARTY RATING SYSTEMS</u>	<ul style="list-style-type: none"> > EPEAT > Cradle to Cradle (C2C) > Green Seal > SMaRT 	<ul style="list-style-type: none"> > Low Waste > National Recognition > Packaging Reduction > Recycling Potentials > Environmental Impact > Social Responsibility > Health Impact Assessment > Energy Efficiency
<u>IMPLEMENTATION STRATEGIES</u>	<ul style="list-style-type: none"> > Walmart (PRIVATE SECTOR) 	<ul style="list-style-type: none"> > Implemented product rating system as a competitive advantage and exercised purchasing power to influence manufacturing processes
	<ul style="list-style-type: none"> > Local Law 123 (PUBLIC SECTOR) 	<ul style="list-style-type: none"> > Created and tested an applicable and comparable pilot program > Evaluated products based on Green Seal standards

RECOMMENDATIONS AND CITY'S ROLE

> **SHORT-TERM RECOMMENDATION**

- > Launch an **internal pilot program** within City government that is manageable and easy to monitor.
- > Utilize applicable components and structures from the **Local Law 123** pilot program.

> **LONG-TERM RECOMMENDATION**

- > Develop and identify **objectives**, **rating criteria**, and **incentives** to address city's ultimate goals.

> **CITY'S ROLE**

- > **Promote**, rather than directly manage, the rating and labeling system and **provide** sufficient incentives.

OBSTACLES TO IMPLEMENTATION

- > Without **sufficient incentives** or **legal consequences**, stakeholders may be unwilling to partake in the program.
- > The evaluation process for products must be comprehensive, transparent and based on scientific evidence – **further analysis is required**.
- > To maintain the program's credibility and authenticity, **meticulous monitoring** and **auditing** are critical and necessary.

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EXISTING MODELS AND BEST PRACTICES

> HOSPITALITY

- > Audubon **Green Leaf Eco Rating**
- > **Green Key** Certification

> RETAIL

- > **EPA WasteWise**: Resource Conservation and Transport Packaging Challenge

> PROPERTY MANAGEMENT

- > **EPA WasteWise** with Cushman & Wakefield
- > **BOMA R-STAR**
- > **RecycleMania**

> FOOD SERVICES

- > **EPA WasteWise** and **Food Recovery Challenge**
- > **RecycleMania**
- > **DSNY Golden Apple & Golden Shovel**

ESSENTIAL COMPONENTS OF BEST PRACTICES

- > **TIME FRAME** → The ideal time frame for a challenge is ~6 months.
- > **COMPREHENSIVE** → The challenge should be easy to participate in and address all forms of waste reduction and diversion.
- > **ATTRACTIVE INCENTIVES** → Incentives should include public recognition and awards and potential cost savings for participating businesses.
- > **SPONSORSHIP OPPORTUNITIES** → Corporate and community sponsorship opportunities should be available.
- > **MEASURABLE PROGRESS** → Administrators should provide tools to easily and effectively measure progress.
- > **GUIDANCE** → Administrators should provide information, educational materials, and guidelines that are simple and easily understood.
- > **ADMINISTRATOR** → Administrators should be clearly identifiable to participants.

RECOMMENDATIONS AND CITY'S ROLE

> **SUGGESTED COMPONENTS OF A CITY-WIDE CHALLENGE**

- > Focus challenge on the **food sector**, promoting organic food waste diversion while still encouraging traditional recycling of paper / plastics / metals / glass
- > Business Improvement Districts (BIDs) can **administer** the challenge to their respective communities
- > Encourage serving food in **recyclable** or **re-usable containers**
- > **6 month** time frame

> **CITY'S ROLE IN THE CHALLENGE**

- > **Recognize challenge winners** through awards, publicity, and possibility a visit from the Mayor or other form of acknowledgement
- > **Encourage the development of infrastructure** necessary to facilitate long-term waste diversion goals for organic food waste
- > Provide **resources, technical assistance or consulting support** for waste management and reduction practices i.e. volunteers, City employees, hotlines
- > Establish **partnerships** with organizations that provide technical assistance for waste management to food service establishments

OBSTACLES TO IMPLEMENTATION

- > **Lack of composting facilities** in New York area
- > Insufficient **hauler capacity** among current haulers for handling large scale organic waste diversion
- > **Insufficient information** for businesses regarding waste-reduction methods and their benefits
- > Lack of capacity and **poor inventory control** within businesses
- > **High cost** of compostable food packaging compared to conventional packaging
- > **Space and design constraints** at food service establishments for additional waste receptacles to divert more types of waste

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MANUFACTURING AND PROFESSIONAL

EXISTING MODELS AND BEST PRACTICES

<ul style="list-style-type: none"> > New York City <ul style="list-style-type: none"> > WasteMatch > Build it Green NYC > Film Biz Recycling > Material For The Arts (MFTA) 	<ul style="list-style-type: none"> > Financially self-sustaining > Physical presence
<ul style="list-style-type: none"> > Austin > San Francisco > Seattle 	<ul style="list-style-type: none"> > Proactive material matching and soliciting > Comprehensive education initiative

RECOMMENDATION AND CITY'S ROLE

OBSTACLES TO IMPLEMENTATION

<ul style="list-style-type: none"> > Expand WasteMatch's scope and capabilities <ul style="list-style-type: none"> > Acquire warehouse space > Accept/sell donated materials to fund itself > Proactive matching > Maintaining the website for long-term continuous exchange and wanted materials 	<ul style="list-style-type: none"> > City Resources <ul style="list-style-type: none"> > Shortage of human resources for WasteMatch > Inadequate financial resources for WasteMatch > Space <ul style="list-style-type: none"> > Insufficient space for material storage > Inconvenient / inaccessible storage space
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ORGANIC FOOD WASTE

EXISTING MODELS AND BEST PRACTICES

> **San Francisco**

> **Seattle**

> **San Jose**

> Mandate **commercial organic food recycling** and using **compostable food packaging**

> **Exclusive contract** with haulers and facilities

> Utilize both **aerobic digestion** and **anaerobic digestion system**

ORGANIC FOOD WASTE (cont'd)

<u>RECOMMENDATIONS AND CITY'S ROLE</u>	<u>OBSTACLES TO IMPLEMENTATION</u>
<ul style="list-style-type: none"> > Exclusive contract with hauler(s) and facilities for organic food waste recovery > Mandate all commercial food establishments sort their food waste > Encourage organic food waste treatment facilities to employ technologies that mitigate “Not In My Backyard” (NIMBY) opposition > Market the product compost by bridging the gap between farmers and compost suppliers 	<ul style="list-style-type: none"> > Requires City action <ul style="list-style-type: none"> > Contract exclusive hauler(s) for organic food waste removal > Encourage farmers to use City's compost > Opposition from haulers who would not benefit from exclusive hauling contracts > Organic food waste recovery infrastructure must be in place before implementing any regulations <ul style="list-style-type: none"> > Must overcome NIMBY reaction of citizens through persuasion, education, communication and incentives

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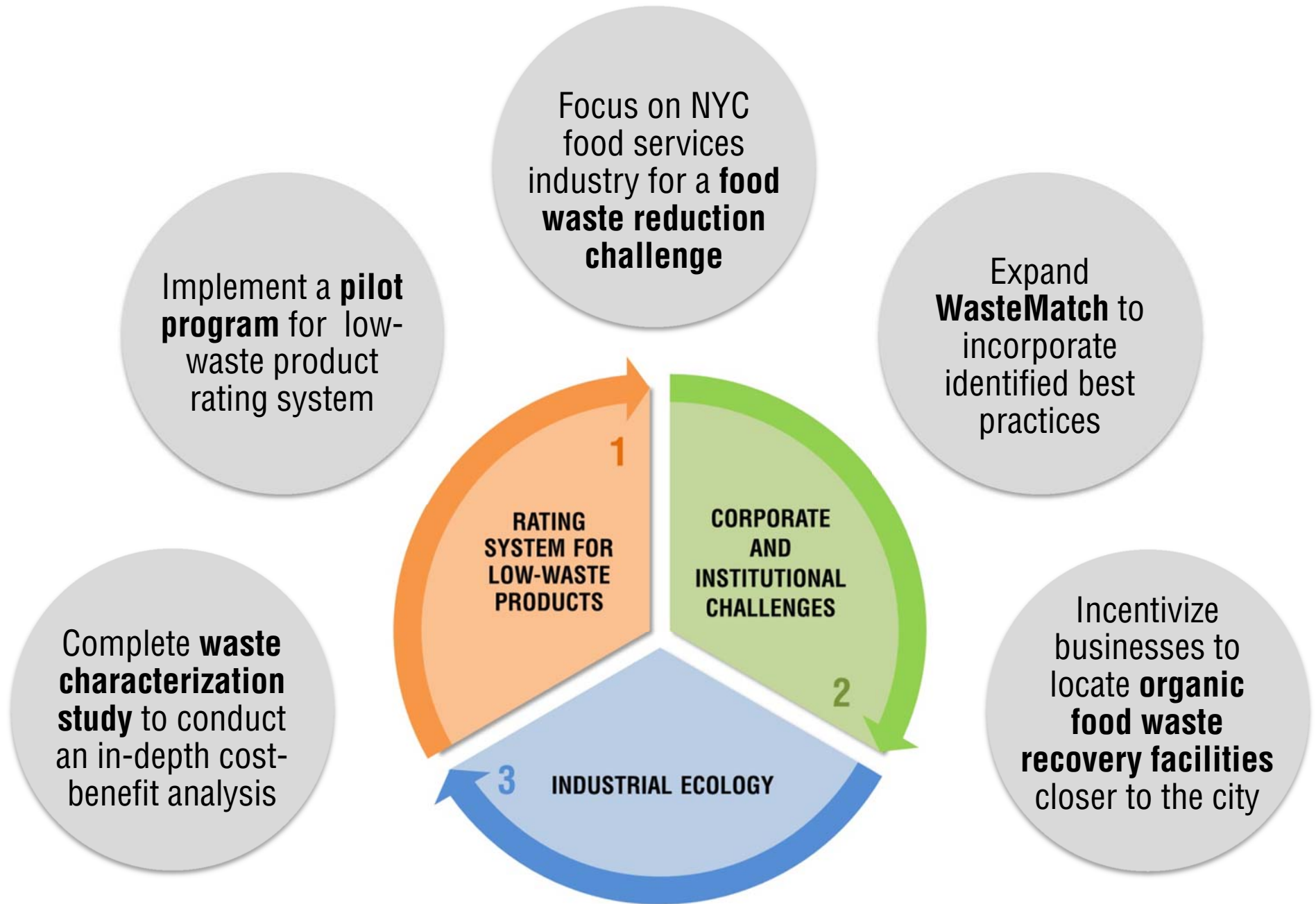
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CONCLUSION AND RECOMMENDATIONS





THANK YOU.

QUESTIONS?

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